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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,914	01/02/2001	Makiba Shigezumi	12757/2000	7340

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EXAMINER	
YUSSUF, SAJID	

ART UNIT	PAPER NUMBER
2141	6

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/750,914	SHIGEZUMI, MAKIBA	
	Examiner	Art Unit	
	Sajid A Yussuf	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 January 2001 and 25 May 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3 and 1/2/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

2. Claim 5 objected to because of the following informalities:

a. As per claim 5 Line 2 Applicant recites "filer" Examiner suspects a grammatical error in which the word Applicant is trying to convey is "filter." Examiner asks Applicant to either concur with the statement or provide a concise definition of the word "filer."

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

b. A person shall be entitled to a patent unless –

c. (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claim(s) 1-18 is/are rejected under 35 U.S.C. 102(e) as being anticipated by Donaldson et al. (US Patent No. 6,321,267 and Donaldson hereinafter).

6. As per claim(s) 1 Donaldson discloses packet verification means for verifying whether there abnormality contents a received DNS (domain name system) packet before transmitting it to a DNS server, (See Column 14 Lines 30-67); and error response means for generating an error response packet and transmitting request source if an abnormality detected, (See Column 15 Lines 1-56).

7. As per claim(s) 2 Donaldson teaches the claimed invention as described in claim(s) 1 above and furthermore discloses said packet verification means checks a DNS packet for obtaining information on a host name, a domain name, and an IP (Internet protocol) address transmitted from a network outside an organization by a person outside the organization using a DNS protocol, (See Column 17 Lines 1-17); and wherein said error response means generates an error response packet and transmits a request source when detecting an abnormality, thereby preventing the person outside the organization from invading a network of the organization by the organization and preventing the DNS server from operating abnormally by receiving a packet having an abnormal format, (See Column 17 Lines 38-67 & Column 18 Lines 1-31).

8. As per claim(s) 3 Donaldson teaches the claimed invention as described in claim(s) 1-2 above and furthermore discloses said packet verification means checks a DNS packet for obtaining information on a host name, domain name, and an IP address transmitted DNS server belonging to a network outside the organization from terminal inside the organization using the DNS protocol, (See Column 17 Lines 1-38); and wherein said error response means generates an error response packet and transmits it a request source when detecting an abnormality, thereby preventing said DNS server belonging to the network outside the organization from operating abnormally, (See Column 17 Lines 38-67 & Column 18 Lines 1-31).

9. As per claim(s) 4 Donaldson teaches the claimed invention as described in claim(s) 1-3 above and furthermore discloses adding and deleting means for adding deleting abnormality detecting conditions of the DNS packet, (See Column 18 Lines 12-31).

10. As per claim(s) 5 Donaldson teaches the claimed invention as described in claim(s) 1-4 above and furthermore discloses A firewall apparatus wherein there is mounted said DNS server filter apparatus claimed in one of claim 1, (See Column 16 Lines 26-65).

11. As per claim(s) 6 Donaldson teaches the claimed invention as described in claim(s) 1-5 above and furthermore discloses a packet filtering firewall apparatus; a DNS packet filter apparatus according one of claim 1 to communicate with the firewall apparatus; and a DNS server for communicating with said packet filter apparatus, (See Column 16 Lines 26-64).

12. As per claim(s) 7 Donaldson discloses a packet receiving section for receiving an inquiry from a terminal or a DNS server and a response packet from a DNS server, (See Column 2 Lines 48-67); a session management section for managing inquiry packets and response packets for an entire control, having a session management table for managing inquiry requests, (See Column 5 Lines 39-67); a packet verification section for verifying whether the inquiry packet or the response packet is abnormal a request generating section for generating an inquiry packet to the DNS server; a response generating section for generating a response packet to be returned to a transmission source of the inquiry packet; a packet transmitting section for transmitting the inquiry packet and the response packet; and response means for verifying whether there is any abnormality in contents of the received packet in a DNS protocol before transmitting the packet to the DNS server regarding the received packet in the DNS protocol and generating an error response packet to transmit it to a request source if an abnormality is detected, (See Column 14 Lines 43-67 & Column 15 Lines 1-56).

13. As per claim(s) 8 Donaldson teaches the claimed invention as described in claim(s) 7 above and furthermore discloses a calling management section for controlling operations of selecting and executing a verification program to be executed by referring to an attribute of said verification program, having a program management table containing entry point address information of the verification program, priority information of executing the verification program, and attribute information of the verification program, (See Column 15 Lines 1-65); a storage device in which the

verification program is stored, (See Column 10 Lines 39-67 & Column 11 Lines 1-16); a load management section for loading an execution file of a verification program specified by a management tool or by a setting file on a memory, for initializing the loaded verification program, for registering an entry point of the verification program onto said program management table of said calling management section together with the obtained attribute, and for controlling a verification program specified to be deleted by said management tool so as to be released, (See Column 16 Lines 12-19); and a service routine comprising a subroutine group for utilizing functions of a DNS server filter body called by the executed verification program, (See Column 15 Lines 20-35).

14. As per claim(s) 9 Donaldson teaches the claimed invention as described in claim(s) 7-8 above and furthermore discloses a pointer to a request packet, an IP address of a request source which has issued an inquiry request, a port number of the request source which has issued the inquiry request, and a flag indicating whether the inquiry request has been transferred to another DNS server if the inquiry request has a normal packet format; wherein said packet receiving section receives a DNS packet and then transmits the packet to said session management section, (See Column 14 Lines 43-67); and wherein said session management section makes settings of an IP address of a transmission source of the received packet, a port number of the received packet, and a flag value indicating "Testing" in said session management table, transmits the received packet to said packet verification section to request a packet verification, checks a type of said received packet to judge whether it is an inquiry request if there is any problem in contents of the verification as a result of the verification of said received packet in said packet verification section; wherein if it is judged to be an inquiry request as a result of the judgment, the session management section requests said response generating section to generate an error response packet, (See Column 15 Lines 1-40) requests said packet transmitting section to transmit the generated packet to a destination specified by the request source IP address and the request source port number on said session management table, and deletes information registered in said session management table regarding the received packet to release the received inquiry request packet; and wherein unless it is an inquiry request, the session management section searches said session management table to

fetch a part related to an original inquiry request, requests said response generating section to generate an error response packet based upon an inquiry request packet by referring to the inquiry packet from the request packet pointer of an entry of said searched session management table, requests said packet transmitting section to transmit the generated response packet to a destination specified by the request source IP address and the request source port number on said session management table, deletes information registered in said session management table regarding the received response packet to release the response packet and deletes the entry registered in said session management table regarding the inquiry request corresponding to the response packet, (See Column 15 Lines 41-61 & Column 16 lines 1-19).

15. As per claim(s) 10 Donaldson teaches the claimed invention as described in claim(s) 7-9 above and furthermore discloses said session management section checks a type of the received packet if there is no problem as a result of the packet verification performed in said packet verification section, searches said session management table for information on the inquiry request corresponding to the response packet if it is a response packet, and verifies whether the received response packet can be a response to the original inquiry request; wherein if there is a need for making an additional inquiry as a result of said verification, said session management section determines the next inquiry destination from the information of the received response packet, requests said request generating section to generate an inquiry request packet, requests said packet transmitting section to transmit it to the next inquiry destination, and deletes information on the response packet in progress of the received inquiry from said session management table to release the response packet; and wherein if the received response packet can be a response to the original inquiry request packet as a result of said verification, the session management section requests said response generating section to generate a response packet to the original inquiry request reflecting the result of the response packet of receiving the response packet, requests said packet transmitting section to transmit it to the transmission source of the original inquiry request, deletes information related to the received response packet from said session management table, and deletes

information related to the original inquiry request from said session management table to release the response packet, (See Column 15 Lines 1-67 & Column 16 Lines 1-64).

16. As per claim(s) 11 Donaldson teaches the claimed invention as described in claim(s) 7-10 above and furthermore discloses said session management section checks a type of the received packet if there is no problem as a result of the packet verification in said packet verification section, checks a transmission source of the received packet if the received packet is an inquiry request and then unless said transmission source is a network inside an organization issuing an inquiry, determines a DNS server outside the organization to which an inquiry is issued first to meet the inquiry request of a network outside the organization, requests said request generating section to generate an inquiry request based upon the original inquiry request, and requests said packet transmitting section to transmit the inquiry to said determined DNS server, or if said transmission source is the network inside the organization issuing the inquiry, requests said request generating section to generate an inquiry request packet base upon the received inquiry request packet, requests said packet transmitting section to transmit the inquiry packet to the DNS server, sets a "Inquiring" value to the flag among the entries of said session management table corresponding to the received packet, and sets a pointer to the received packet to the pointer of the entry on said session management table, (See Column 15 Lines 1-67 & Column 16 Lines 1-64).

17. As per claim(s) 12 Donaldson teaches the claimed invention as described in claim(s) 7-11 above and furthermore discloses a cache memory (i.e., memory) previously stores DNS server information, (See Column 10 Lines 60-67 & Column 11 Lines 1-5).

18. As per claim(s) 13 Donaldson discloses packet receiving processing for receiving an inquiry from a terminal or a DNS server in the DNS protocol and a response packet from a DNS server via a communication apparatus, (See Column 2 Lines 48-67); session management processing for managing inquiries and response packets for an entire control, having a session management table for managing the inquiry requests, (See Column 10 Lines 39-67); packet verification processing for

verifying whether an inquiry or a response packet is abnormal; request generation processing for generating an inquiry packet to a DNS server; response generation processing for generating an inquiry packet to the DNS server; response generation processing for generating a response packet to be returned to a transmission source of the inquiry packet; packet transmission processing for controlling an operation so as to transmit an inquiry and a response packet through a communication apparatus; and DNS server filter processing for verifying whether there is any abnormality in contents of the packet before transmitting the packet to the DNS server regarding the received DNS packet; if an abnormality is detected, it generates and transmits an error response packet, (See Column 14 Lines 43-67 & Column 15 Lines 1-56).

19. As per claim(s) 14 Donaldson teaches the claimed invention as described in claim(s) 13 above and furthermore discloses wherein said program management table comprises entry point address information of the verification program, priority information of executing the verification program, and attribute information of the verification program; wherein the calling management processing is performed for selecting and executing a verification program to be executed by referring to the attribute of said verification software, (See Column 15 Lines 1-65); and wherein the load management processing is performed for loading an execution file of the verification program specified by a management tool or a setting file on a memory, for initializing the loaded verification program, for registering an entry point of the verification program together with an obtained attribute on said program management table, and for releasing a verification program specified to be deleted by said management tool from the memory, (See Column 16 Lines 12-19).

20. As per claim(s) 15 Donaldson teaches the claimed invention as described in claim(s) 13-14 above and furthermore discloses a group of recording media is divided into a plurality of portions, (See Column 15 Lines 20-35) and said portions are recorded on said media, respectively, (See Column 10 Lines 39-67 & Column 11 Lines 1-16).

21. As per claim(s) 16 Donaldson teaches the claimed invention as described in claim(s) 13-15 above and furthermore discloses a group of recording media is divided into a plurality of portions, (See Column 15 Lines 20-35) and said portions are recorded on said media, respectively, (See Column 10 Lines 39-67 & Column 11 Lines 1-16).

22. As per claim(s) 17 Donaldson discloses a packet receiving processing for receiving an inquiry from a terminal or a DNS server in the DNS protocol and a response packet from the DNS server via a communication apparatus, (See Column 2 Lines 48-67); session management processing for managing the inquiry and the response packet for an entire control using a session management table for managing inquiry requests, (See Column 10 Lines 39-67); packet verification processing for verifying whether the inquiry and the response packet are abnormal request generation processing for generating an inquiry packet to the DNS server; response generation processing for generating a response packet returned to a transmission source of the inquiry packet; packet transmission processing for controlling an operation to transmit the inquiry and the response packet via the communication apparatus; and DNS server filter processing for verifying whether there is any abnormality in contents of the received DNS packet before transmitting the packet to the DNS server regarding the received DNS packet and for generating and transmitting an error response packet when detecting an abnormality a group of recording media is divided into a plurality of portions, (See Column 15 Lines 20-35) and said portions are recorded on said media, respectively, (See Column 14 Lines 43-67 & Column 15 Lines 1-56).

23. As per claim(s) 18 Donaldson teaches the claimed invention as described in claim(s) 17 above and furthermore discloses a program management table having entry point address information of the verification program, priority information for executing the verification program, and attribute information of the verification program, calling management processing for selecting and executing a verification program to be executed by referring to the attribute of said verification software, (See Column 15 Lines 1-65); and load management processing for loading an execution file of the verification program specified by a management tool or a setting file on a memory, for

initializing the loaded verification program, for registering an entry point of the verification program together with the obtained attribute on said program management table, and for releasing the verification program specified to be deleted by said management tool from the memory, (See Column 16 Lines 12-19).

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajid A Yussuf whose telephone number is (703) 305-8752. The examiner can normally be reached on Monday-Thursday 7:30-5:00 PM and Alternate Fridays.

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sajid Yussuf
Patent Examiner
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21 June 2004

RUPAL DHARIA
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